Lots of Dots!

Teacher's Guide

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Sample pages

Line Masters

This Teacher's Guide includes access to modifiable and PDF line masters.

To access these Mathology Little Book Line Masters, please log in at Pearson Places, www.pearsonplaces.com.au and select the Mathology Little Books icon. The Line Masters can be found in the 'Explore Resources' section.

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Pearson

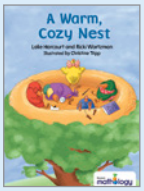
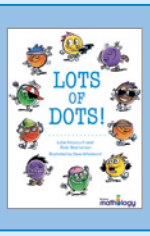
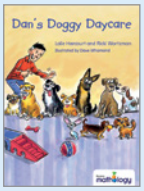
Mathology Little Books

This series recognizes that children's understanding of maths concepts develops over time, so this series allows you to choose the book that best matches a child's or group's level of mathematical understanding. The books engage children at just the right level in a wide range of mathematical ideas, thinking, and activities in a variety of real world and imaginary contexts.

Lots of Dots! engages children in conversations, investigations, and activities that help to develop their understanding of the big maths idea that "Numbers tell us how many and how much." *

Big Idea: Numbers tell us how many and how much

(Count and subitize. Read, write, model and order numbers.)

TITLE	KEY MATHS FOCUS	MATHS SKILLS	STRATEGIES	ADDITIONAL FOCUS
	Count sets to 5 Recognize numerals to 5	Stable order 1-1 correspondence Cardinality Subitize	Count on Touch and count	Describe 1 more than a given number (to 5) Use positional language to describe location Compare height
	**Count and compare sets to 10** **• Connect number names and quantities to 10** **Compose and decompose to 10**	**Subitize** **1-1 correspondence** **Stable order** **Cardinality** **Identify parts and the whole**	**Count on** **Touch and count** **Count forward and back** **Tens friends**	**Copy and describe repeating patterns** **Recognise circles** **Use positional language to describe location**
	Count sets to 10 • Connect number names and quantities to 10 Compare quantities to 10	1-1 correspondence Stable order Cardinality Counts on or back by 1 or 2 from a number Compare, identify and create sets with 1 or 2 more, less or equal	Count on Touch and count Count forward and back Predict how many	Compare height Use positional language to describe location Sort and record findings
	Count and compare sets to 10 • Connect number names and quantities to 10 Compose and decompose 10	1-1 correspondence Stable order Cardinality Subitize Determine how many more/less Identify parts and the whole	Count on Touch and count Tens friends	Use positional language to describe location
	Count sets to 10 • Write and match numerals to counted numbers Compare sets to 10	1-1 correspondence Stable order Cardinality Match, name and write numerals to 10 Subitize Compose and decompose to 10	Count on Touch and count	Use positional language to describe location Sort and identify sorting rules

Sample pages

* This book can also be used to address the big idea "Numbers are related in many ways."

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Counting to find how many

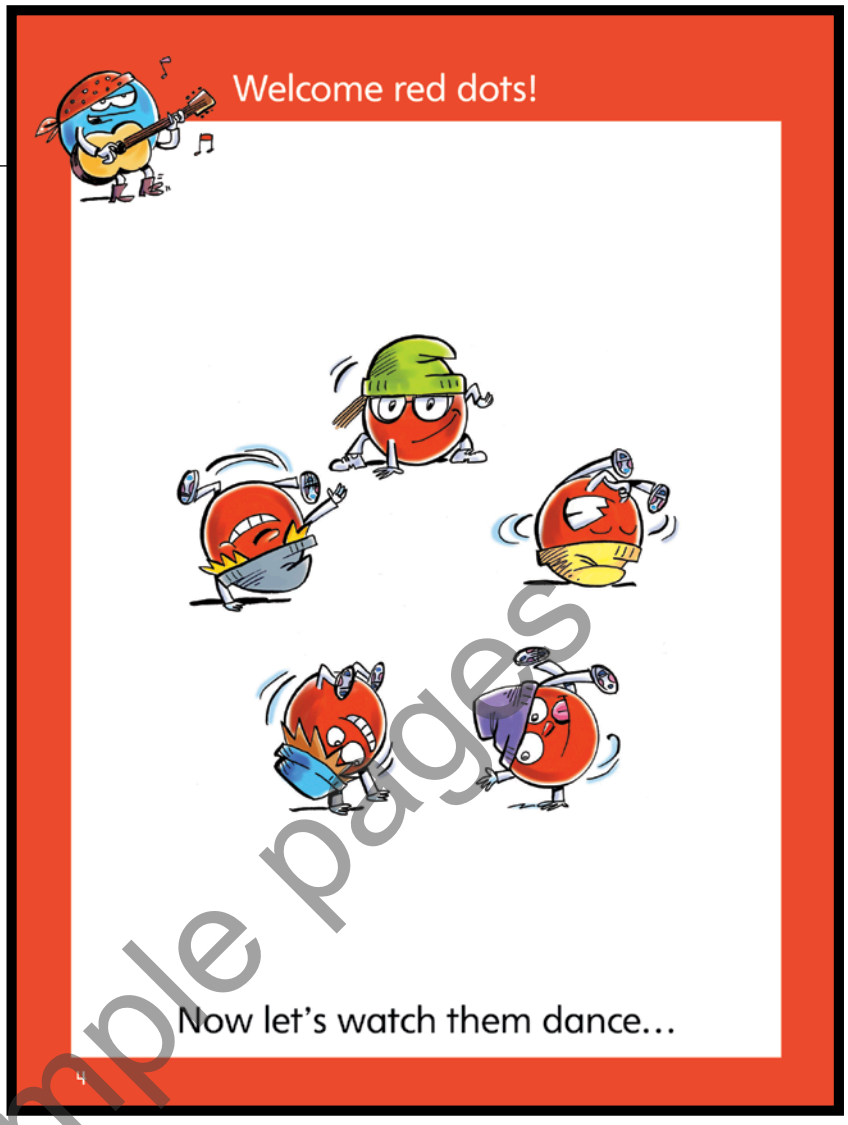
- Count the red dots. Count the dot with the yellow hat first. How many red dots are there on page 4? *(5)*
- Suppose you were to count the dot with the green hat first. How many red dots do you think there would be? *(5)* How do you know?
- How many red and blue dots are there? *(6)*

Counting to compare

- Do you think there are more red dots upside-down or more red dots right-side-up? *(upside-down)* How will you check?

Composing and decomposing to 10

- How many red dots do you count? *(5)* How can you describe them using numbers?



Sample pages

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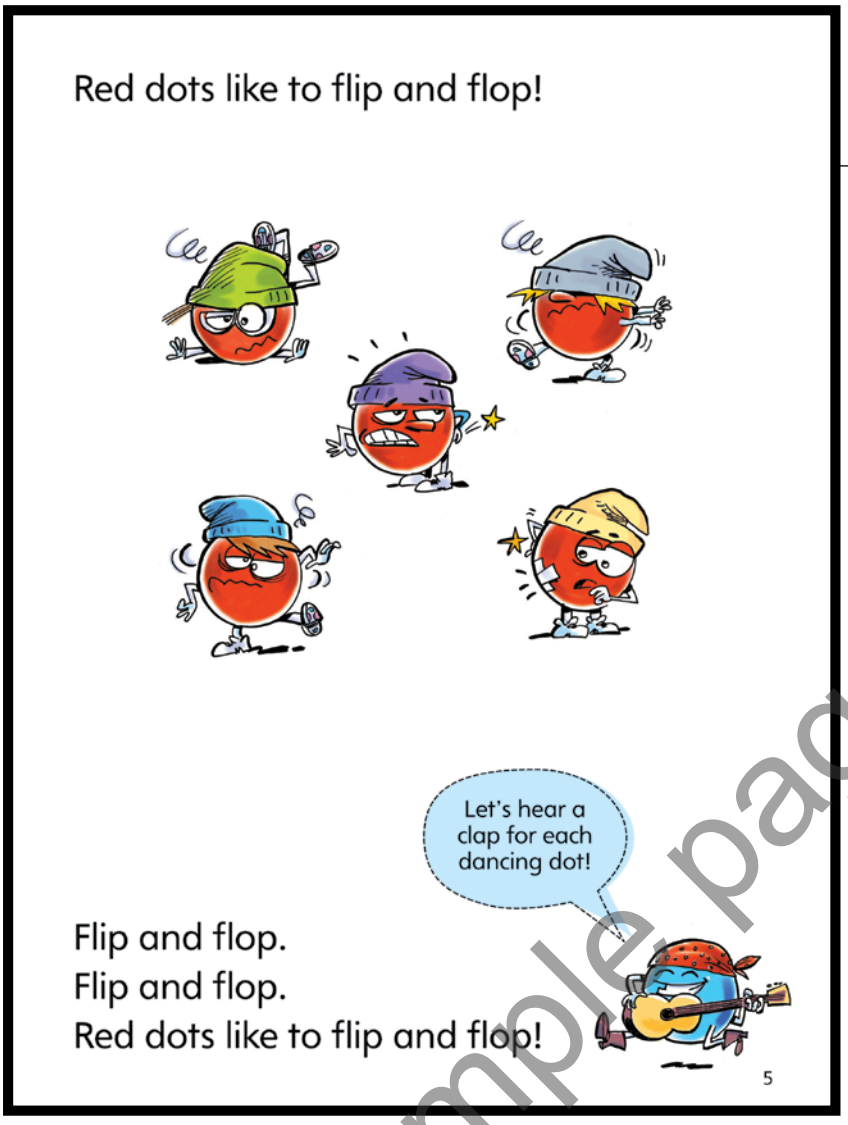


Counting to find how many

- How many red dots are there? *(5)*
- How many red and blue dots are there? *(6)*

Composing and decomposing to 10

- The dots have moved into a new arrangement. How many red dots do you count? *(5)* How can you describe them using numbers?

Sample pages

WATCH FOR...

- When responding to the question of how many dots, does the child count each set separately? Or, does the child recognize 5 without counting (subitizing)?
- When counting the arrangements using different starting locations, does the child recognize that the number of dots does not change (order irrelevance)?

Large Group Options

If you read ***Lots of Dots!*** to a large group or whole class, you might project the book to facilitate reading aloud and better engage children in counting and comparing. These activities engage children in exploring and communicating their understanding of numbers to 10; choose the activities that best address your children's learning needs.

FLASH AND COUNT

ENGAGE

Play "Flash and Count" with different pages from ***Lots of Dots!***

Cover the blue musician with a sticky note to focus children on the dancing dots.

Hold up page 4 for about 2–3 seconds. Say:
- **Use your fingers to show how many dancing dots.**

Flash the page again, offering children a chance to revise their response.
- **How did you see 5?**
- **Touch and count to show us.**
- **Who saw 5 a different way? Show us.**
- **Let's record how you saw 5 so you can compare later.**

Invite a volunteer to make a sketch on a large sticky note and affix it below the 5 on a large posted number line with numbers 1 to 10.

Repeat for pages 5, 6, and 7.

WORK ON IT

Continue to play Flash and Count for a few minutes each day using Dot Pattern Cards (LM 4). It is suggested you focus on regular patterns and numbers to 5 before moving on to more irregular arrangements and other numbers. Continue to post the cards on the number line so children have a visual reference of how numbers are related.

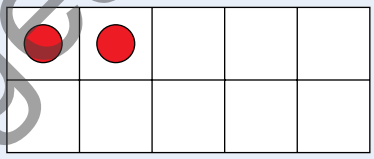
To vary the game, follow a similar procedure with different coloured magnets on a magnetic five-frame or ten-frame. By offering several arrangements of the same number children will come to realize they know "how many" there will be without counting. At this point they focus on describing how they see the number.

SHARE AND REFLECT

Meet and prompt reflection by asking questions such as:
- **Does it matter which dot you start with when you count? If you started with a different dot, does the number of dots change?**
- **Are some arrangements easier to count?**
- **Look at our number line. Use numbers to tell something you notice.**

MATHS FOCUS: subitize small quantities to 10; count and describe sets to 10

MATERIALS: ***Lots of Dots!***, pp. 4–7; Dot Pattern Cards (LM 4); coloured magnets and a magnetic five-frame or ten-frame



WATCH FOR...
- Does the child count each dot to find how many or does the child recognize (subitize) without counting?
- Does the child describe the parts of the whole?

Sample pages

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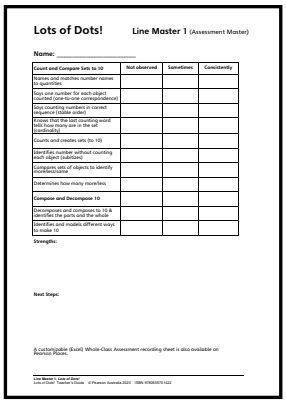
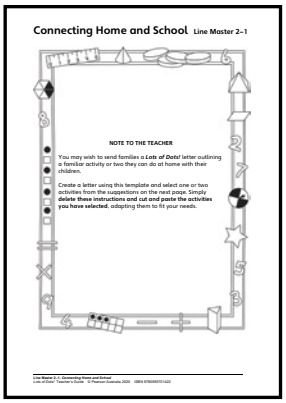
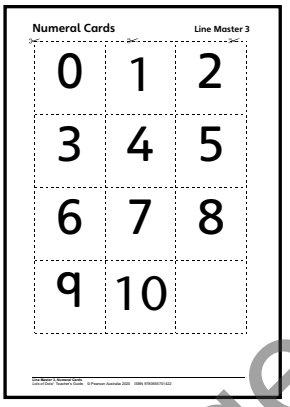


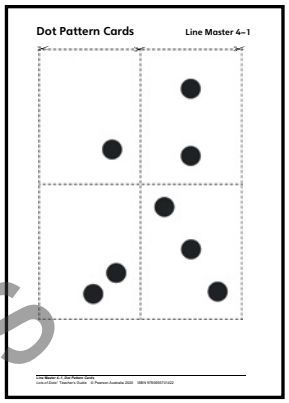
Line Master 1
Assessment Master



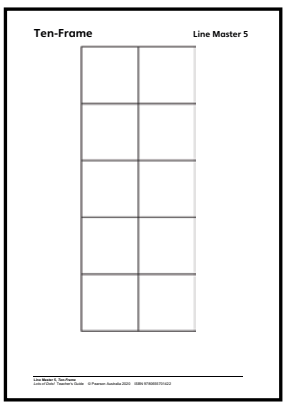
Line Master 2
Connecting Home and School Letter Template



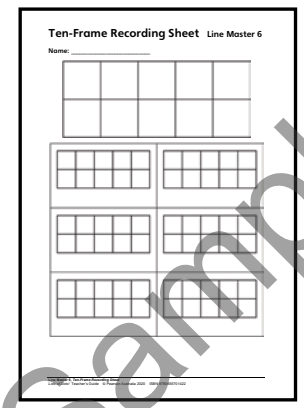
Line Master 3
Ten-Trains



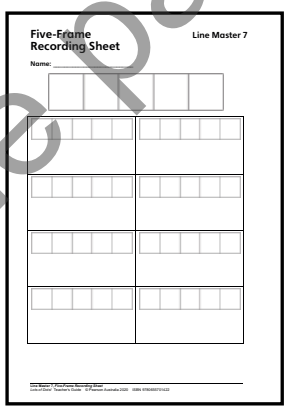
Line Master 4
Ten-Frame



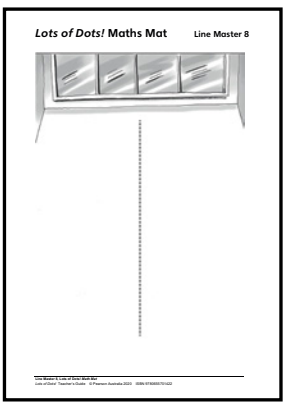
Line Master 5
Ten-Frame



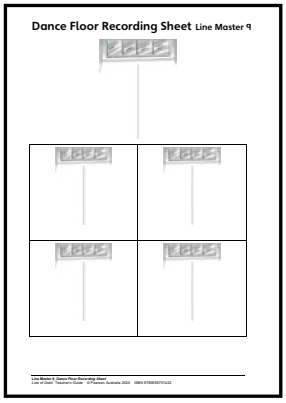
Line Master 6
Ten-Frame Recording Sheet



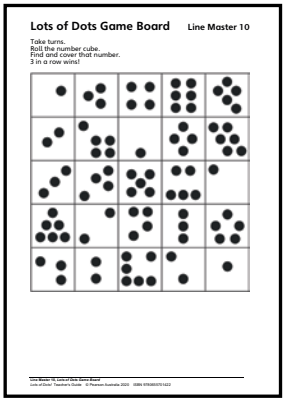
Line Master 7
Five-Frame Recording Sheet



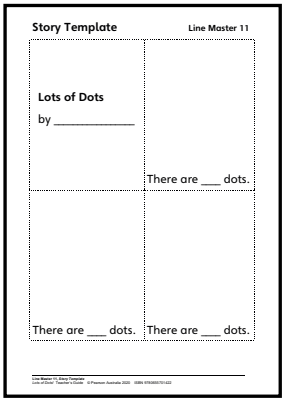
Line Master 8
Lots of Dots! Maths Mat



Line Master 9
Dance Floor Recording Sheet



Line Master 10
Lots of Dots Game Board



Line Master 11
Story Template

Sample pages

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